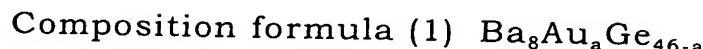


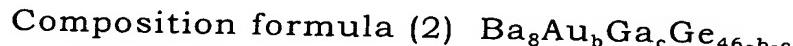
CLAIMS:

1. A clathrate compound represented by the following composition formula (1):



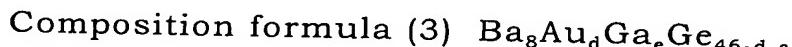
$$(16/3 \leq a \leq 6).$$

2. A clathrate compound represented by the following composition formula (2):



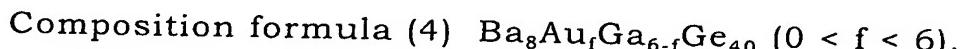
$$(5 \leq b < 16/3, c = 16-3b).$$

3. A clathrate compound represented by the following composition formula (3):

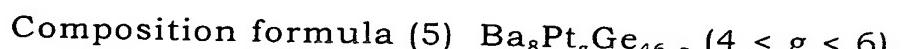


$$(0 \leq d < 5, e = 16-3d).$$

4. A clathrate compound represented by the following composition formula (4):



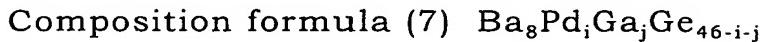
5. A clathrate compound represented by the following composition formula (5):



6. A clathrate compound represented by the following composition formula (6):

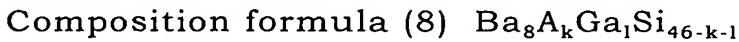


7. A clathrate compound represented by the following composition formula (7):



$$(0 \leq i \leq 4, j = 16-4i).$$

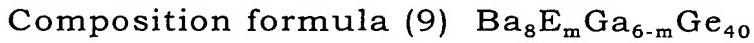
8. A clathrate compound represented by the following composition formula (8):



$$(0 \leq k \leq 4, l = 16-4k)$$

wherein A in Composition formula (8) represents Pd or Pt.

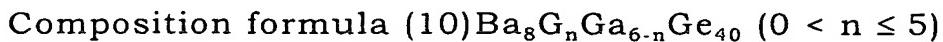
9. A clathrate compound represented by the following composition formula (9):



$$(5 < m < 6)$$

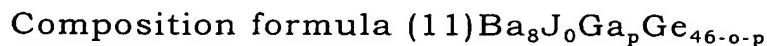
wherein E in Composition formula (9) represents Cu or Ag.

10. A clathrate compound represented by the following composition formula (10):



wherein G in Composition formula (10) represents Cu or Ag.

11. A clathrate compound represented by the following composition formula (11):



$$(0 < o < 16/3, p = 16-3o)$$

wherein J in Composition formula (11) represents Cu or Ag.

12. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 1.

13. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 2.

14. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 3.

15. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 4.

16. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 5.

17. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 6.

18. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 7.

19. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 8.

20. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 9.

21. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 10.

22. A thermoelectric conversion element comprising a sintered body of the clathrate compound of claim 11.

23. A method for producing a thermoelectric conversion element comprising a sintered body of a clathrate compound whose constituent atoms include Ba and Ge, the method comprising:

melting elements which are to constitute the clathrate compound so as to synthesize the clathrate compound;

heat-treating the synthesized clathrate compound at 650 to 900 °C for 50 to 250 hours;

forming particles from the heat-treated clathrate compound; and

sintering the particles.